

IN THE CLAIMS

Please amend the claims as follows:

1-17. (Cancelled)

18. (Currently amended) A method of positioning a mobile station in a cellular network including a controlling base station and a plurality of positioning elements each of which is capable of generating a positioning signal and transmitting said positioning signal without requiring receipt of an instruction signal from said controlling base station, wherein said controlling base station controls communications within a cell in which said positioning elements are located, and wherein said controlling base station performs the steps of:

generating and transmitting a positioning instruction signal to said a mobile station, said positioning instruction signal identifying an expected time of arrival of said positioning signals by said mobile station;

generating a paging signal and paging said plurality of positioning elements within the cell thereby causing said plurality of positioning elements to generate and transmit said positioning signals, each said positioning signal comprising information identifying the positioning element which transmitted said positioning signal; and

receiving a report from said the mobile station in an uplink communication on the results of detection of said positioning signals by said mobile station.

19. (Previously presented) A method of positioning a mobile station as in claim 18 in which, when the reported results of detection indicate that said mobile station did not receive said positioning signal transmitted by a given positioning element, the given positioning element is instructed by said base station to retransmit said positioning signal at a higher power level within a predetermined time.

20. (Previously presented) A method of positioning a mobile station as in claim 19, wherein the positioning element retransmits its positioning signal at the next allotted time with a power level increased by a predetermined amount.

21. (Currently amended) A positioning element for use in positioning mobile stations communicating with a controlling base station of a cellular network via an air interface and in which said the positioning element is capable of transmitting a positioning signal without requiring receipt of an instruction signal from said controlling base station, said positioning element; synchronizes with downlink transmissions of said the controlling base station, and transmits positioning signals with predetermined delays in relation to receipt of certain instances of signals transmitted from said the controlling base station, said positioning signals comprising information identifying said the positioning element.

22. (Currently amended) A positioning element for use in positioning mobile stations communicating with a controlling base station of a cellular network via an air interface and in which said the positioning element; synchronizes with downlink transmissions of said the controlling base station, and transmits positioning signals periodically at predetermined times relative to the time of detection by said positioning elements of a signal or part of a signal transmitted by said base station, and without instruction by said base station, said positioning signals comprising information identifying said the positioning element.

23. (Previously presented) A positioning element as in claims 21 or 22 for use in a CDMA cellular network and in which the positioning signals comprise spreading codes uniquely associated with each positioning element.

24. (Currently amended) A mobile station for communicating with a cellular network comprising a controlling base station and a plurality of positioning elements each of which is capable of generating a positioning signal, and transmitting said positioning signal without requiring receipt of an instruction signal from said controlling base station, and in which said the mobile station synchronizes with downlink transmissions from said controlling base station and detects positioning signals transmitted from said positioning elements synchronized to said downlink transmissions,

wherein the timing window for the expected time of arrival of said the positioning signals to be detected is are transmitted to said the mobile station from said the controlling base station in advance of receipt of said the positioning signals at said the mobile station, each positioning signal comprising information identifying said the positioning element which transmitted said positioning signal.

25. (Previously presented) A mobile station as in claim 24 operating with a CDMA cellular network in which the results of detection of positioning signals are reported to the controlling base station in uplink communication between said mobile station and the base station.

26. (Previously presented) A positioning element in accordance with claim 21, wherein said positioning element does not transmit any information to said controlling base station.

27. (Previously presented) A positioning element in accordance with claim 22, wherein said positioning element does not transmit any information to said controlling base station.